

# APPLICATION OF THE NAMES *VERBESINA MOLLIS* AND *VERBESINA SERICEA* (COMPOSITAE: HELIANTHEAE)

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Two very distinct species of Mexican *Verbesina*, *V. mollis* and *V. sericea*, have long been confused. The error stems from Klatt (1884), who reduced *V. sericea* to the synonymy of *V. mollis*, justified solely by "15. Von *Verbesina mollis* HBK. fehlt ein Original-Exemplar, aber *V. sericea* Knth. & Bouché ist nach meiner Ansicht identisch mit *V. mollis*." Not only are the species amply distinguished in the type descriptions (both authored by Kunth), but also Klatt studied only specimens from B, and did not study the holotype of *V. mollis* at P.

Klatt's reduction was accepted by Robinson and Greenman (1899) in their synopsis of *Verbesina*. They assigned their "*V. mollis*" to sect. *Saubinetia*, characterized by short, little-exserted rays; my examination of specimens annotated by them indicates, as might be expected, that they had only *V. sericea* at hand when they did their work. Proper *V. mollis*, with its long-exserted rays, would come to sect. *Verbesinaria* in their work.

Blake (1926) followed Robinson and Greenman in including a "*V. mollis*" in his treatment of the woody composites of Mexico. He gave the range as "Oaxaca; type collected between Guanajuato and Villalpando". The first element in this range represents the distribution of *V. sericea*, while the second element represents the type locality of *V. mollis* as given in Humboldt et al. (1818; 1820), in the state of Guanajuato, not Oaxaca, and some 500–600 km north of Oaxaca.

Because *V. sericea* is so clearly woody, workers have routinely identified it in Blake's key, and herbaria contain many specimens of *V. sericea* labelled as *V. mollis*. Specimens of the obviously herbaceous, long-rayed *V. mollis* are often filed with it. The two species may be separated by the following key.

- Herbaceous perennials, 4–15 dm tall; leaves harshly pubescent and green above, softly white-tomentose below, decurrent, the stems prominently winged; rays bright yellow, 7–10 mm long, equalling or exceeding the disc; northeastern and central Mexico, north of Oaxaca ..... 1. *V. mollis*.  
Shrubs, to 1.5 m tall; leaves softly pubescent and green above, densely and softly silky-sericeous below, constricted at base, not decurrent, stems winged; rays dull greenish-yellow, 2–3 mm long, scarcely exceeding the involucre and never exceeding the disc; known only from Oaxaca ..... 2. *V. sericea*.



1. VERBESINA MOLLIS Kunth, in Humboldt, Bonpland, & Kunth, Nov. Gen. Sp. Pl. (folio edition) 4: 159. 1818; verbatim in the quarto edition 4: 203. 1820.

Herbaceous perennial from a caudex. Stems erect, 4–15 dm tall. Leaves alternate, basal and mid-cauline broadly ovate to lanceolate, toothed, 2–2.5 cm wide, 6–12 cm long, all but the uppermost bracteal ones narrowed and decurrent at base onto the stem as wings 3–5 mm wide (the wings very rarely lacking), lacking or nearly so on the upper third of the stem; stiffly hirsutulous above, softly pilose to tomentose beneath, atomiferous-glandular below beneath the pubescence, leaves and the stem wings strongly bicolorous. Heads 3–15 (20) in a very open panicle, peduncles 1–17 cm long, naked or very sparsely and distantly bracteate. Involucre campanulate, 5–7 mm high, phyllaries ca 30, narrowly lanceolate to linear, hirsute, barely imbricated in about 3 series, somewhat spreading or reflexed at maturity. Rays ca 13, fertile, yellow, 7–10 mm long, equalling or exceeding the disc. Ray achenes brown-black, sometimes tan-tuberculate on both faces, the body 4 mm long and 2 mm wide, 1-nerved on each face, oblanceolate, very broadly winged from base to summit, the wing on each side ca 1.25 mm wide, tan to white; pappus awns 2, without intermediate squamellae, stiff, persistent, 2.25 mm long, tan to white, antrorsely hispidulous. Pales concave and slightly keeled, oblanceolate, shorter than the disc florets, hyaline below, narrowed to an elongate-deltoid herbaceous, hispid, acute tip, persistent after the shedding of the achenes. Disc florets 80–90, corollas yellow, tube 0.75 mm long, throat expanded, 2.5 mm long, the deltoid lobes 0.4–0.5 mm long, thinly hairy throughout. Disc achenes like those of the rays. Chromosome number unknown.

Distribution. Oak and pine woodlands, ravines, and roadsides, northeastern and central México, from Coahuila and Nuevo León south to Jalisco and Querétaro; flowering and fruiting Aug–Nov.

TYPE: MEXICO. GUANAJUATO: "inter Guanajuato et Villalpando", *Humboldt and Bonpland s.n.* (HOLOTYPE: P; photograph of holotype: GH!, MICH!, OSH!; IDC microfiche #6209. 107:II.6!). Fig. 1.

Representative specimens: MÉXICO. COAHUILA: *Robert 172* (MICH)—an extreme variant with unwinged stems and leaves nearly concolorous; GUANAJUATO, *Moore and Wood 4767* (GH, MICH, WIS); JALISCO, *McVaugh 24315* (MICH); NUEVO LEÓN, *Brunken and Perino 209* (OS, OSH); QUERÉTARO, *Crawford et al. 1355* (OS, OSH); SAN LUIS POTOSÍ, *Rzedowski 11333* (CAS, OS); ZACATECAS, *Rzedowski y McVaugh 951* (MICH).

2. VERBESINA SERICEA Kunth & Bouché, Sp. Nov. Hort. Berol. 14, in Ind. Sem. Hort. Berol. 1848. 1849; verbatim republication, Ann. Sci. Nat. Bot. series III. 11: 228. 1849.

*Vernonia exaltata* Hort. ex Kunth & Bouché, locis citatis, nom. nud.

*Vernonia karwinskiana* Hort. ex Kunth & Bouché, locis citatis, nom. nud.; not *Vernonia karvinskiana* DC., Prod. 5: 62. 1836.





Figure 1. *Verbesina mollis* (Rzedowski y McVaugh 951, MICH).



From the context of the two publications of Kunth and Bouché, I infer that these nomina nuda were labels for plants in the garden; no formal descriptions accompanying these names were ever published. No specimens under these names are extant in B.

Shrub or sub-shrub to 1.5 m tall. Leaves alternate, ovate-lanceolate, 5.5–10 cm long, 1.7–3.5 cm wide, narrowed proximally to a short subpetiolar base, not decurrent onto the stem, bicolored, green and thinly pilose above, densely silvery-sericeous below, not atomiferous glandular beneath the pubescence, indistinctly callus-toothed or entire. Stem wings 1–3.5 mm wide, bicolored, lacking with age. Heads 1–20, terminating elongated axillary peduncles and more commonly in congested cymes at the ends of branches, at first hemispheric, later globose. Involucre campanulate, 3–3.5 mm high, phyllaries ca 21 in 3 indistinct series, scarcely imbricated, the 4–5 outermost ones obovate, blunt, sericeous, the inner lanceolate, acute, sericeous, spreading or reflexed at maturity. Rays 7–9 (13), fertile, dull yellow-green, 2–3 mm long, not or barely exceeding the involucre, tube pilose. Ray achenes black, flattened parallel to the phyllaries but tending to be quadrangular by enlargement of the facial areas, appressed sericeous, 1.5–1.75 mm long, the white wings ca 0.25 mm wide; pappus awns 2, without intermediate squamellae, fragile, microscopically antrorsely barbed, barely 0.5 mm long. Pales slightly keeled, oblanceolate, shorter than the disc florets, hyaline below, green to brown above, the tip triangular, externally pilose, persistent after the shedding of the achenes. Disc florets ca 100, corollas dull greenish-yellow, tube 1 mm long, pilose, limb 1.75 mm long, lobed about halfway, pilose at base, lobes nearly glabrous. Disc achenes black, 1.75–2 mm long, strongly flattened, thinly sericeous or glabrous on the faces, wings white, each about 0.5 mm wide, pappus awns 2, very fragile. Chromosome number unknown.

Distribution. Rather arid, brushy savannas and cutover forrests; known only from Oaxaca where it is apparently not rare; flowering and fruiting Aug–Nov.

TYPE: neotype (here designated) MÉXICO. OAXACA: Monte Alban, near Oaxaca, 5,800 ft, 3 Sep 1894, *Pringle* 4863 (NEOTYPE: US 1418089!; ISONEOTYPES: GH!, UC!, MICH!).

The original material was cultivated in the Berlin Royal Botanical Gardens from seed sent by Karwinski from México; a specimen was not preserved in B, nor in P, or if preserved in B then destroyed in World War II, fide Oberkustos Dr. H. W. Lack, pers. comm., 5 May 1981; possible type material is an excellent tracing and some leaf fragments, GH! ex herb. Klatt, but there is no clue to the provenance or age of the specimen. Fig. 2.

Representative specimens: MÉXICO. OAXACA: *Cronquist* 9688 (MICH, US); *La Duke et al.* 503 (OS, OSH); *Hartman and Funk* 4164 (OS, TEX); *Breedlove* 35951 (CAS).





Figure 2. *Verbesina sericea*, isoneotype (Pringle 4863, GH).



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